



Developing Environmental Law Champions

Strengthening the Capacity For Environmental and Climate Change Laws in Asia and the Pacific



Session 5: Climate Change Law

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Learning Outcomes

Session Topic :

- Understand the basic science of climate change
- Understand international regime on climate change (UNFCCC, Kyoto Protocol, Paris Agreement, NDCs and SDGs)
- Understand the mitigation and adaptation measures
- Use of REDD and Flexible Mechanisms
- Links between Paris Agreement and SDGs
- Understand the scope and content of domestic climate laws

Teaching Methodology:

- Understand the value of a brainstorming exercise to generate ideas
- Develop ability to give constructive feedback to peers
- Understand a range of methods for teaching climate change and clean energy law
- *See also IUCNAEL Climate Law Teaching Resources (including Simulations and Negotiations)*



What is climate change?

- Climate change refers to significant, long-term changes in the global climate.
- The global climate is the connected system of sun, earth and oceans, wind, rain and snow, forests, deserts and savannas, and everything people do, too. The climate of a place can be described as its rainfall, changing temperatures during the year and so on.
- Climate change is a global environmental issue that has been identified by scientists over the last 30 years as a significant threat to both humans and biological diversity.

(<https://warmheartworldwide.org/climate-change/>)



Introduction to climate law

- Climate law relates both to the mitigation of, and adaptation to, climate change
- Vast potential scope of climate law and policy: carbon markets, energy efficiency, building codes, certification standards, trade law, urban planning, corporate securities disclosure rules, fuel efficiency requirements, agriculture and forestry policies, tort litigation, ocean law, migration law, public health legislation

(<http://www.ciesin.org/docs/001-011/001-011.html>)



What makes climate law unique?

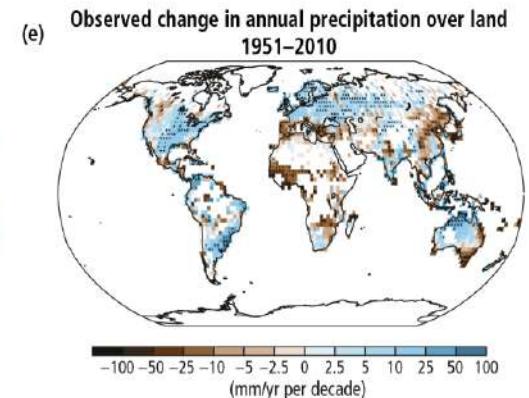
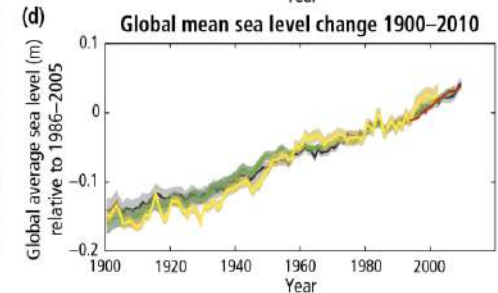
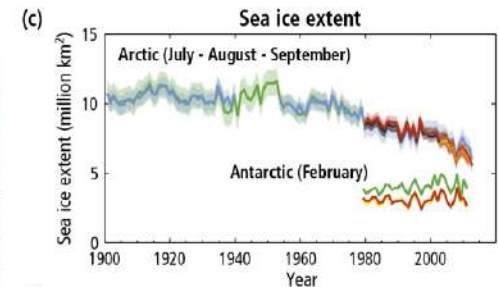
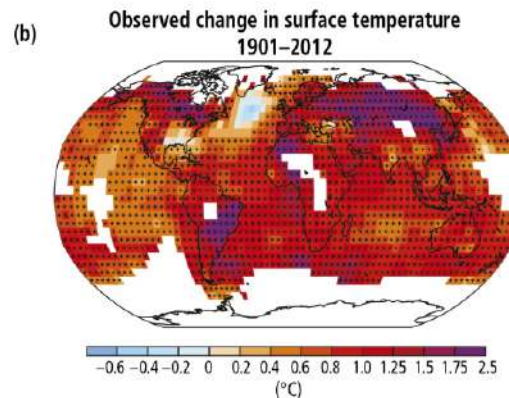
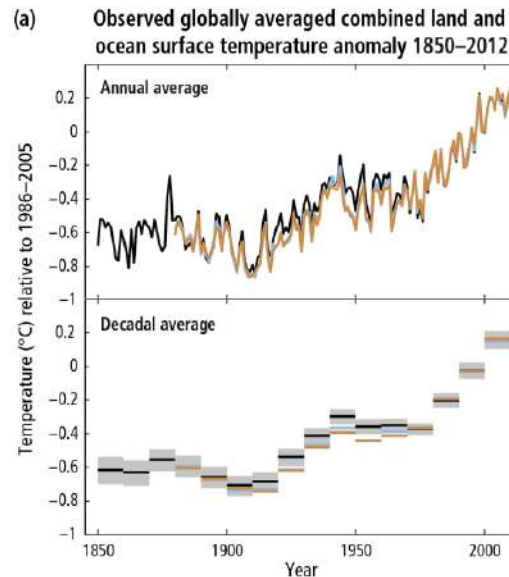
- New branch of environmental law which is a half part of international law
- Rapidly growing law
- Interconnectedness with environmental, energy, economic and social issues
- Most complicated and cross cutting sectoral law
- Very broad scope and unlimited timeframe,
- Related to all living creatures and non-living things
- Applicable from present generation to future generations and intra-generations to inter-generations
- Makes responsible to all individual of the earth, national and international agencies, all level's governments of a nation, regional integration associations and intergovernmental agencies, social and business entrepreneurs' organizations.



The Science of global climate change

- Climate change as a global problem:
 - Increase in global temperature
 - Sea level rise
 - Sea ice decrease
- Changes in precipitation, more drought and more flooding

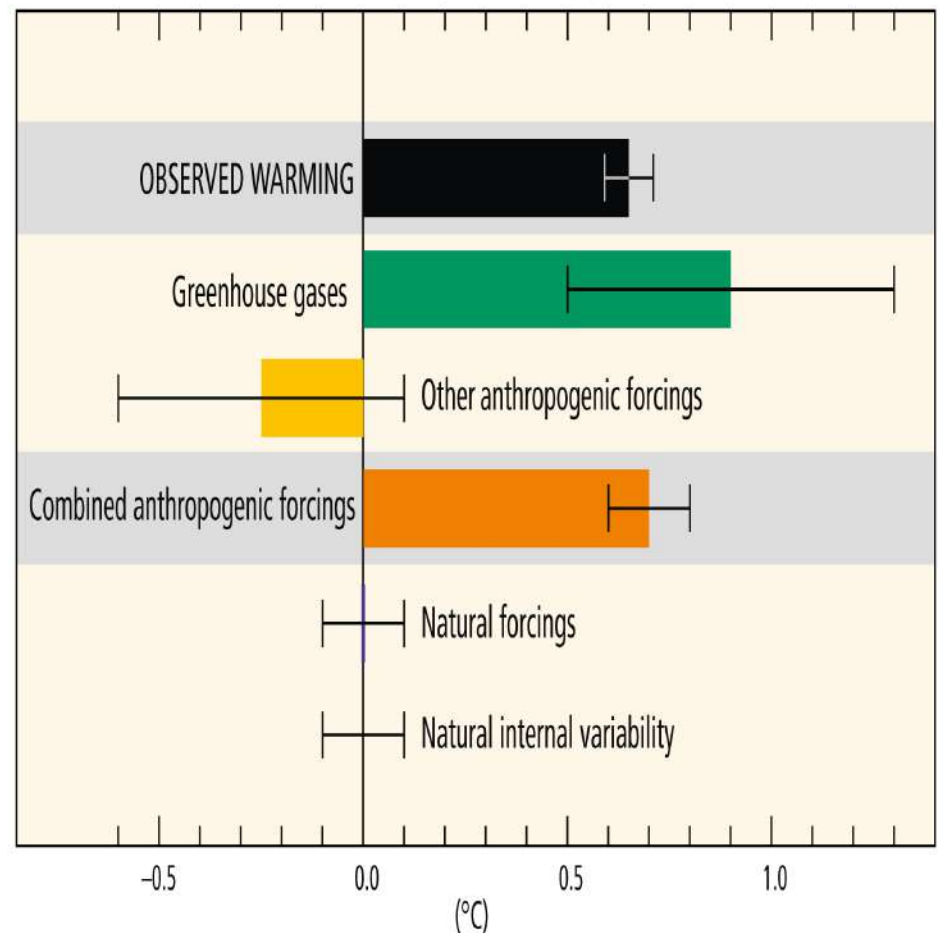
(<http://www.ipcc.ch/>)



The Science of global climate change- Contd. (IPCC AR5 Synthesis Summary Report for Policy Makers 2014).

- Warming of the atmosphere and ocean system is unequivocal.
- It is *extremely likely* that human influence has been the dominant cause of observed warming since 1950.
- Concentration of greenhouse gases (GHGs) in the atmosphere has increased to levels unprecedented on earth in 800,000 years.
- The global surface temperature increase by the end of the 21st century is likely to exceed 1.5 C relative to the 1850 to 1900 period for most scenarios, and is likely to exceed 2.0 C for many scenarios.

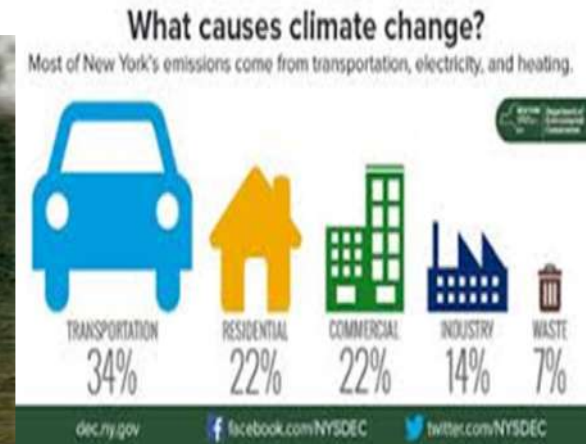
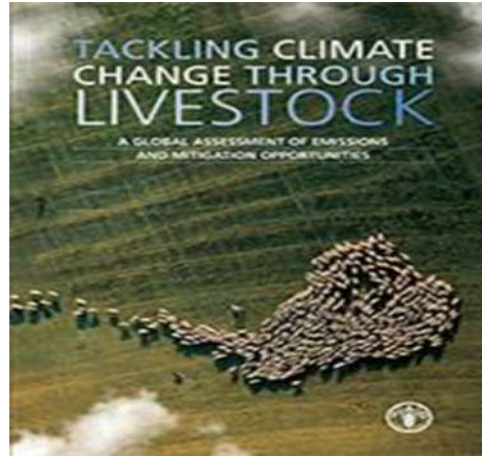
Contributions to observed surface temperature change over the period 1951–2010



Causes of global climate change

(http://ar5-syr.ipcc.ch/topic_observedchanges.php)

- Emissions of GHGs (CO₂, methane, nitrous oxide and fluorocarbons)
- Burning of coal, oil, and gas produces CO₂ emissions
- energy and cement production now account for about 90% of total CO₂ emissions
- Deforestation
- Increased livestock farming
- Economic and population growth further drive CO₂ emission increases from fossil fuel combustion



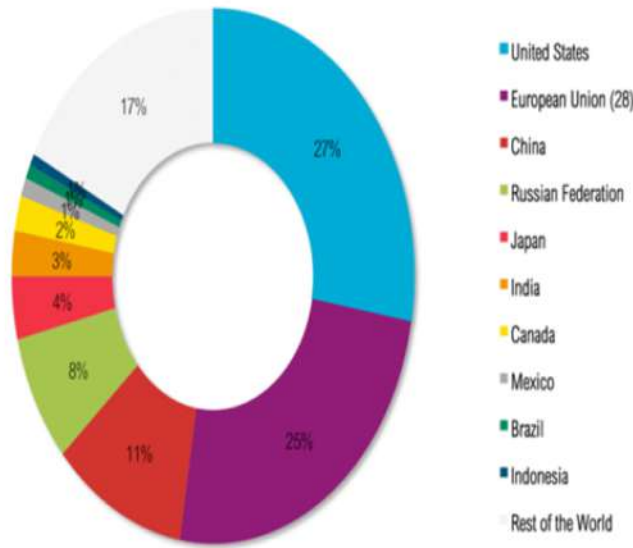
Causes and Effects of Climate Change

- (Documentary of National Geographic 3. 04 min)

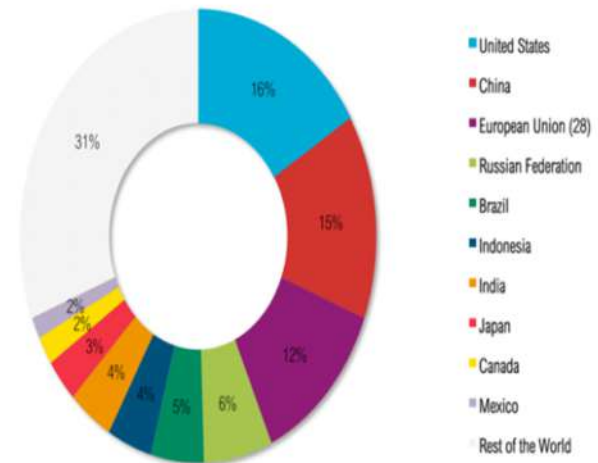


Changing responsibility for global climate change

Cumulative CO₂ Emissions 1850–2011 (% of World Total)



Cumulative GHG Emissions 1990–2011 (% of World Total)



<http://bit.ly/11SMpjA>

WORLD RESOURCES INSTITUTE

<http://bit.ly/11SMpjA>

WORLD RESOURCES INSTITUTE

WRI, <https://wri.org/blog/2014/11/6-graphs-explain-world%E2%80%99s-top-10-emitters>



Glacier Calving Causes Huge Shooter

- Video Play (7.46min)



Introduction to global climate change law

- 1992/94 UNFCCC signing and entry into force (197 Parties)
Initiated since 1988.
- 1997/2005 Kyoto Protocol signing and entry into force (192 Parties).
Initiated since 1994.
- 2015/16 Paris Agreement signing and entry into force (176 Parties).
Initiated since 2012.



Overview of UNFCCC

- Convention open for signature at Rio on in 1992 and entered into force on 21 March 1994, 197 parties
- Establishes basic system of governance:
 - Ultimate objectives and principles:
 - Common obligations (the obligations of all parties Annex I, Art. 4(1), 8, 9,10) to develop national programs.
 - Obligations of developed country parties (Art. 4(2)).
 - Obligations of developed and other developed country parties (Annex II, Art.4(3-8).
 - Obligations of developing country parties (Art.4(7)).
- Institutional arrangements (As of 2013, 46 organizations have been responding to climate change risk of loss and damage associated with the adverse effects of climate change).
- No binding emissions targets.



Overview of Kyoto Protocol

- Agreed on 11 December 1997, entered into force on 16 Feb 2005, 192 parties
- **Commitments** of Annex 1 countries to reduce their overall emissions by 5.2% below 1990 levels between 2008-2012 (1st commitment period)
- Ability to meet mitigation commitments through “flexibility mechanisms”:
 - Clean Development Mechanism (Art.12)
 - Joint Implementation (Art.6)
 - International Emissions Trading (Art.17)
 - Implementation issues
- Scope and role of the flexibility mechanisms
- Extent of land-use and forest changes allowed in the calculations
- Weak compliance monitoring and enforcement mechanism.



Mitigation and adaptation measures of climate change

- Mitigating Measures is about reducing the release of greenhouse gas emissions that are warming our planet.
- The many mitigation strategies include:
 - Retrofitting buildings to make them more energy efficient;
 - Adopting renewable energy sources like solar, wind and small hydro;
 - Helping cities develop more sustainable transport such as bus rapid transit, electric vehicles and biofuels; and
 - Promoting more sustainable uses of land and forests.



Mitigation and adaptation measures of climate change-Contd.

- Adaptation Measures: Adaptation means anticipating the adverse effects of climate change and taking appropriate action to prevent or minimize the damage they can cause, or taking advantage of opportunities that may arise.
- Adaptation measures include:
 - Using scarce water resources more efficiently;
 - Adapting building codes to future climate conditions and extreme weather events;
 - Building flood defenses and raising the levels of dykes; developing drought-tolerant crops;
 - Choosing tree species and forestry practices less vulnerable to storms and fires; and setting aside land corridors to help species migrate.
- Paris Agreement and SDGs are the tools for mitigation and adaptation.

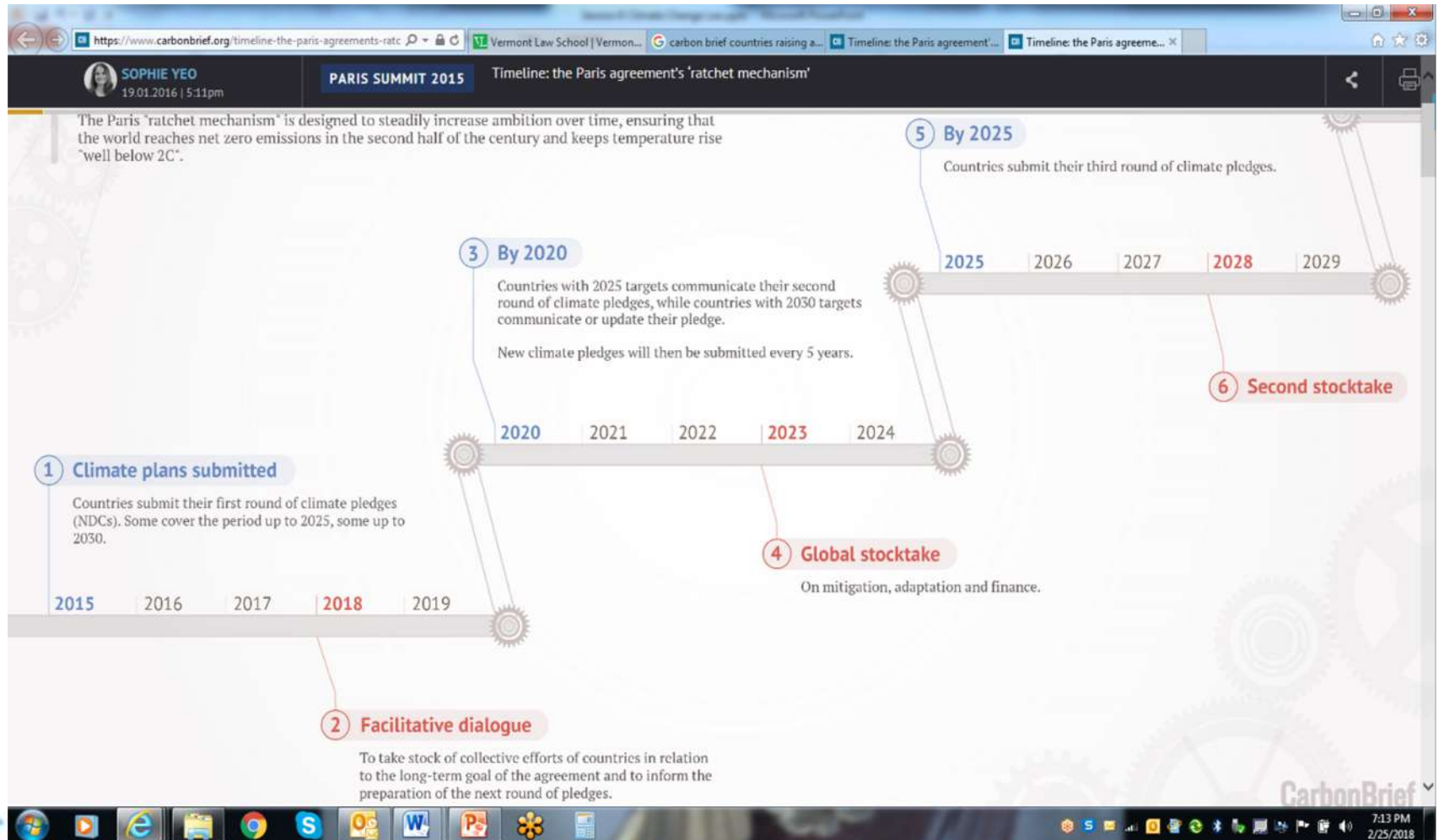


The Paris Agreement, 2015

- Signed: 22 April 2016, Effective: 4 November 2016, Signatories: 195, Parties: 181
- Sets a global temperature goal: “well below 2°C” (Art. 2)
- Aims to reach “global peaking of GHG emissions as soon as possible,” to achieve balance of emissions and sinks by second half of 21st century (Art. 4)
- Establishes nationally determined contributions (NDCs) as way to achieve these global goals, with revisions every 5 years to increase contributions (Arts. 3 & 4)
- Sets a global stock take every 5 years starting 2023 to assess collective achievement (Art. 14)
- Balance of finance for mitigation and adaptation (Art. 9)



Timeline for the Paris Agreement



Nationally Determined Contributions (NDCs)

- NDCs “communicate ambitious efforts” on:
 - Mitigation and Adaptation
 - Finance
 - Technology transfer and capacity building
 - Transparency
- Of 176 Parties to the Paris Agreement, 169 have filed their first NDCs.



The screenshot shows a web browser displaying the UNFCCC NDC Registry. The page lists 16 countries, each with its national flag, the text 'FIRST NDC', and a link to the 'COUNTRY PAGE'. The countries listed are Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Marshall Islands, Mauritania, Mauritius, Mexico, Micronesia, Monaco, Mongolia, Morocco, and Myanmar.

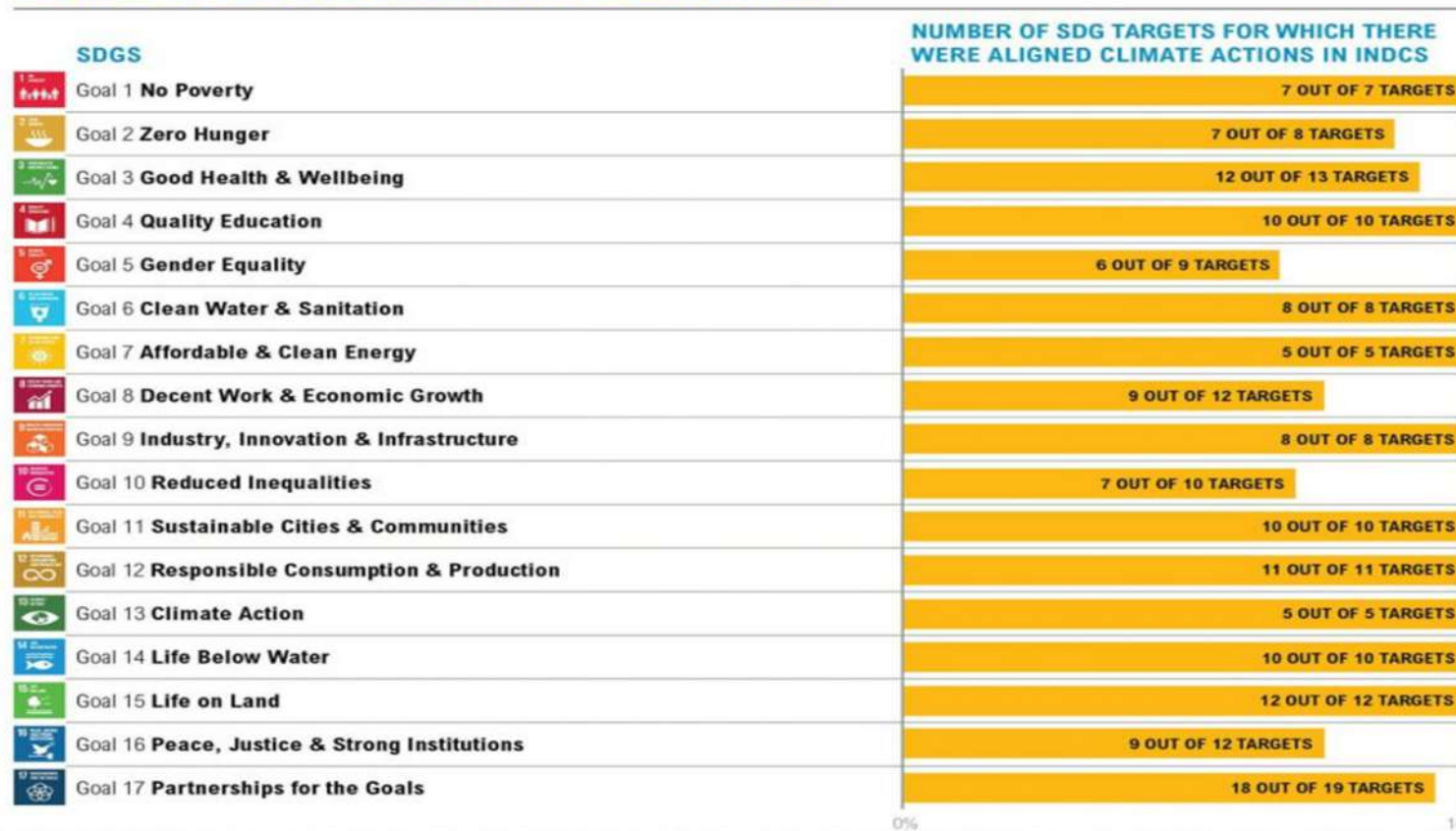
Country	First NDC	Country Page
MADAGASCAR	FIRST NDC	COUNTRY PAGE
MALAWI	FIRST NDC	COUNTRY PAGE
MALAYSIA	FIRST NDC	COUNTRY PAGE
MALDIVES	FIRST NDC	COUNTRY PAGE
MALI	FIRST NDC	COUNTRY PAGE
MALTA	FIRST NDC	COUNTRY PAGE
MARSHALL ISLANDS	FIRST NDC	COUNTRY PAGE
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MEXICO	FIRST NDC	COUNTRY PAGE
MICRONESIA	FIRST NDC	COUNTRY PAGE
MONACO	FIRST NDC	COUNTRY PAGE
MONGOLIA	FIRST NDC	COUNTRY PAGE
MOROCCO	FIRST NDC	COUNTRY PAGE
MYANMAR	FIRST NDC	COUNTRY PAGE

• <http://www4.unfccc.int/ndcregistry/Pages/All.aspx>



How NDCs under Paris Agreement reinforce SDGs?

Analyzing the Degree of Alignment between the SDGs and INDCs



Source: WRI, 2016, *Examining the Alignment between the Intended Nationally Determined Contributions and the Sustainable Development Goals*



Climate Change and the SDGs

- SDG 13: Take urgent action to combat climate change
- 13.1 strengthen resilience
- 13.2 integrate climate change into national policies
- 13.3 improve education on climate change
- 13.a implement developed country financial commitments
- 13.b raise capacity for climate planning in LDCs and SIDS

SDG 7: Affordable, reliable, sustainable energy for all

- 7.1 Universal access to energy
- 7.2 Increase renewable energy
- 7.3 Double global rate of energy efficiency
- 7.a Enhance international cooperation on clean energy research and technology
- 7.b Expand infrastructure for sustainable energy for all in developing countries



Reducing Emissions from Deforestation and Forest Degradation (REDD)

- The Initial Idea: Slow climate change by saving trees and reducing emissions from deforestation and forest degradation
- REDD+: includes the Conservation of Forest Carbon Stocks, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks.
- REDD++ extends REDD concept to land use for agricultural activity
- The Legal Basis:
 - The 2015 Paris Climate Accord included an explicit provision on REDD (Article 5) which draws on dozens of prior policy decisions.
 - There is a growing push through REDD+ to include avoided deforestation into future global emissions reductions schemes.



Climate change laws around the World

- As of 2018: more than 1,500 laws to mitigate and adapt to climate change have now been passed, an increase from about 60 laws in place two decades ago.
- The climate change law database now covers 164 countries, up from 99 in 2015.
- Legislative laws are passed by parliaments, whereas executive laws or policies are enacted by governments.
- There has been a 20-fold increase in the number of global climate change laws since 1997

(Source: GRI: Global trends in climate legislation and litigation, 2017 update)



National climate change legislation

- Examples of national mitigation legislation
- Prescribing targets for the reduction of GHG emissions
- Requiring reporting of GHG emissions for a national inventory
- Imposing economic measures to reduce emissions:
 - carbon tax
 - “cap and trade”
- Mandating energy-specific measures, like targets for renewable energy; feed in tariffs (“net metering”); energy efficiency standards
- Creating carbon sequestration measures, like carbon farming

(Grantham Research Institute: www.lse.ac.uk/GranthamInstitute)



National climate change legislation

- Kinds of national adaptation legislation:
 - Land and resources
 - coastal land use controls (retreat policies)
 - endangered species protection
- Infrastructure
 - building codes
 - utility siting requirements
 - updating flood insurance maps
- Business disputes and regulation
 - corporate disclosure requirements
- Health and safety concerns
 - vector migration education
 - drinking water protection
 - disaster response, management
- Governance and process
 - environmental impact assessments
 - government planning



Climate change litigations and the Outcomes

- **Urgenda Foundation v. the Netherlands**

“The Dutch government must reduce CO2 emissions by a minimum of 25% (compared to 1990) by 2020 to fulfil its obligation to protect and improve the living environment against the imminent danger caused by climate change.”

➤ Enables the teaching fast-moving developments in law

- **Ashgar Leghari v. Pakistan**

government of Pakistan ordered to implement the National Climate Change Policy and convened a Climate Change Commission to oversee and report to the Court on progress.

➤ Climate litigation also teaches comparative environmental law

- **Philippines**

Human rights petition against top 47 climate polluters, “Carbon Majors”

➤ The regulatory role of climate lawsuits

<http://www.lse.ac.uk/GranthamInstitute/wp->



Tracking climate change litigation

- The Status of Climate Change Litigation : A Global Review
- United Nations Environment Programme; Columbia University, Sabin Center for Climate Change Law (2017-05),
<http://wedocs.unep.org/handle/20.500.11822/20767>
- Global trends in climate change legislation and litigation: 2018 snapshot
Grantham Institute on Climate Change and the Environment et al,
<http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2018/04/Global-trends-in-climate-change-legislation-and-litigation-2018-snapshot-2.pdf>
- ADB'S Climate Change Litigations Bench Book (forth coming 2019)
Asia Pacific Judicial Conference on Environmental Law and Climate Change Adjudication, 29-30 October 2018, ADB.

